Supporting Information

Hein *et al*. 10.1073/pnas.0807705105

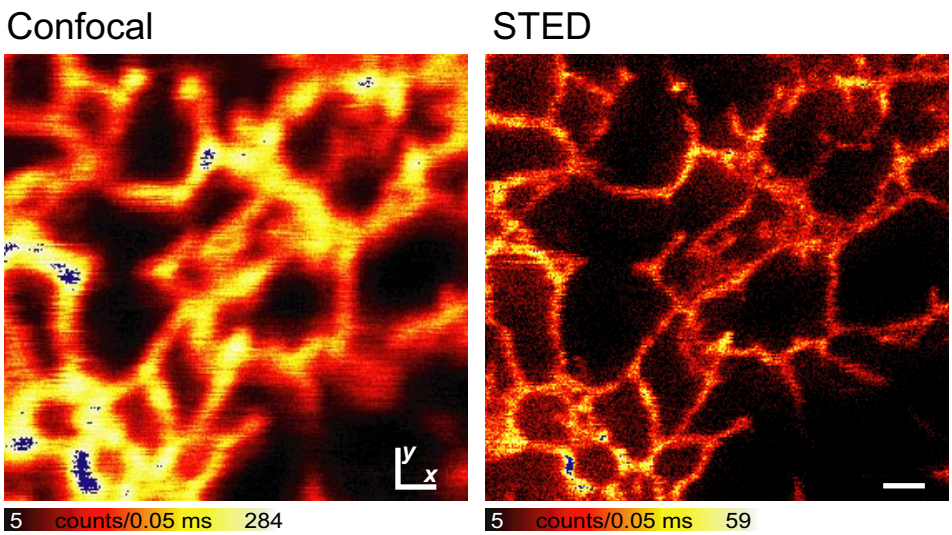


Fig. S1. STED imaging of living endoplasmic reticulum using a water-dipping lens (HCX PL APO, ×63, Leica). Shown is confocal imaging with a focal excitation power of 3 μW and corresponding STED image (focal STED power, 59 mW), which reveals finer structures. (Scale bar, 500 nm.)

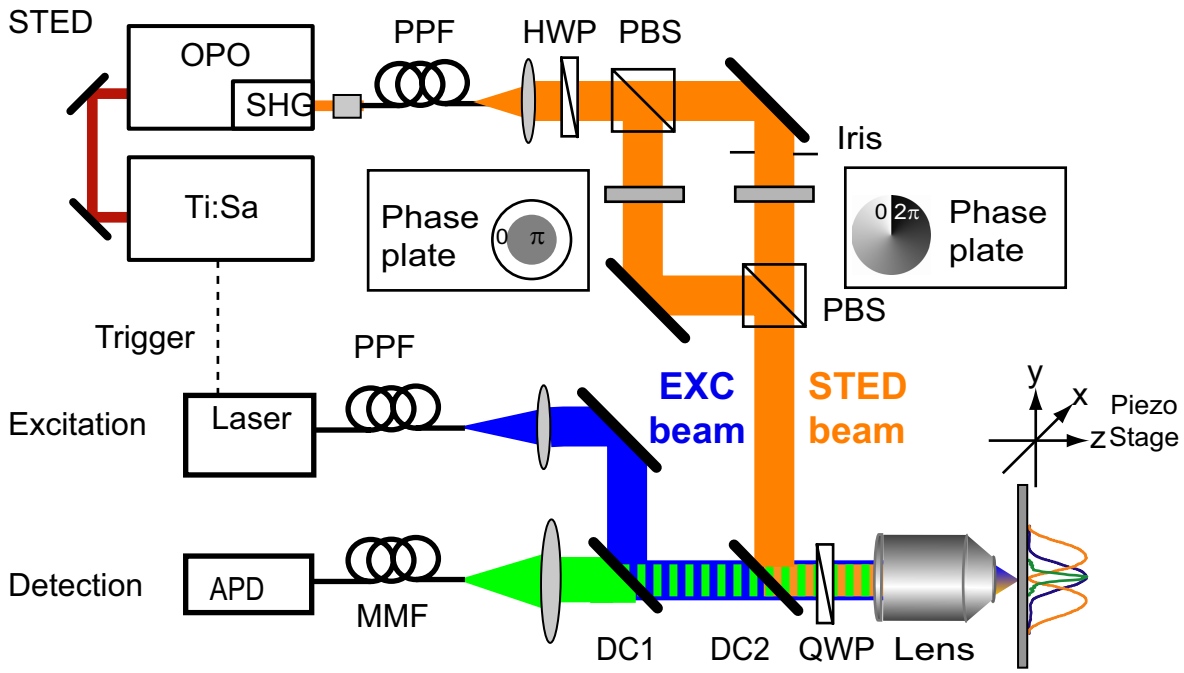
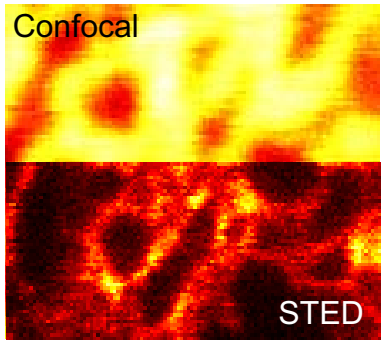


Fig. S2. Experimental setup for live-cell subdiffraction imaging of Citrine-labeled proteins. APD, avalanche photo diode; DC, dichroic mirror; HWP, half-wave plate; MMF, multimode optical fiber; OPO, optical parametric oscillator; PBS, polarizing beam splitter cube; PPF, polarization preserving optical fiber; QWP, quarter-wave plate; SHG, second-harmonic generation; Ti:Sa, Ti:sapphire.



Movie S1. Superresolution movie (2.19 × 1.95 μm) from the endoplasmic reticulum in a living mammalian (PtK2) cell, labeled with the fluorescent protein Citrine. The confocal reference image (first image in the movie) is followed by 15 images recorded by STED microscopy featuring a resolution of ≈60 nm in the focal plane. The occasional black lines are caused by occasional intermissions of the recording electronics of the setup; their presence also illustrates the raw nature of the data.

Movie S1 (AVI)